

Appl. No. 10/605,252
Amdt. dated June 06, 2005
Reply to Office action of March 17, 2005

Amendments to the Claims:

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

5 1 (currently amended): A method for phase matching between a first-element screw bit
of a screwdriver and a second-element screw recess of a screw by detecting a
magnetic flux, the screw bit and the screw first-and-second-elements both being
formed out of magnetic permeable material, the method comprising:
aligning the first-element screw bit and the second-element screw such that a first
10 axis extends through the first-and-second-elements screw bit and the screw;
providing a magnetic flux generator for generating a magnetic flux between the first-
and-second-elements screw bit and the screw;
providing a magnetic sensor for detecting the magnetic flux between the first-and-
the-second-elements screw bit and the screw; and
15 moving the first-element screw bit toward the second-element screw along the first
axis for inserting the screw bit into the screw recess until the magnetic flux
detected by the magnetic sensor reaches a predetermined value.

20 2 (original): The method of claim 1 wherein the magnetic flux generator is a magnet.

3 (original): The method of claim 1 wherein the magnetic sensor is a Hall element for
converting the magnetic flux into a corresponding voltage signal.

25 4 (original): The method of claim 3 further comprising providing an amplifier for
amplifying the voltage signal outputted from the Hall element.

5 (original): The method of claim 1 wherein the magnetic sensor is a magnetic
resistance device (MR device) having a resistance that changes according to a

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magnitude of the magnetic flux.

6 (original): The method of claim 1 wherein the magnetic sensor is a magnetic diode,
and a current flowing though the magnetic diode changes according to a magnitude
5 of the magnetic flux.

7 (cancelled).

8 (currently amended): The method of ~~claim 7~~ claim 1 wherein the screw is installed on
10 a metal plate.

9 (original): The method of claim 8 wherein the magnetic flux generator is positioned
on the metal plate and the magnetic sensor is set on one end of the screwdriver.

15 10 (cancelled).

11 (currently amended): The method of ~~claim 7~~ claim 1 wherein the magnetic flux
generator is set on one end of the ~~screw-driver~~ screwdriver and the magnetic sensor
is set on one end of the screw.

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12 (new): The method of claim 1, wherein as the screw bit is inserted into the screw
recess, the screw bit is rotated to fit into the screw recess, thereby phase matching
the screw bit and the screw recess.